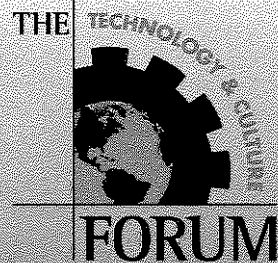


ANNUAL REPORT

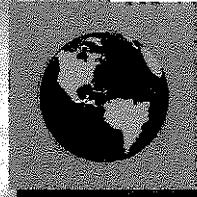
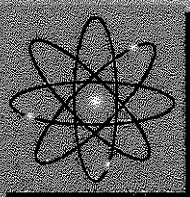
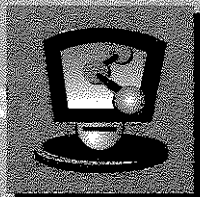


1999/2000

THE TECHNOLOGY & CULTURE

FORUM

AT MIT



The Technology and Culture Forum celebrated the new century with its most ambitious program year in memory. We sponsored ten programs, a lunch discussion, and two dinners. From the Infinite Corridor to the Au Bon Pain Café, people approached me, acclaiming the 1999-2000 T&C season as "the best ever."

The mission of T&C is to promote thoughtful discourse about critical issues of our time. Within the MIT context, we pay particular attention to ethical implications of scientific discovery and technological innovation. We hope T&C plays a significant role in preparing MIT students, faculty, and staff to be ethically reflective leaders for our highly technological, rapidly changing world.

We opened the program year on September 27 with 150 people gathering for "Re-Inventing Higher Education for the 21st Century: Beyond Science and Engineering." Former Provost John Deutch noted that, although the people within universities are intellectually adept, the institutions themselves are neither flexible nor adaptable. He argued for new educational models that move beyond science and engineering reflecting our intellectual reality and stimulating innovation that addresses global needs. In responding, Senior Biology major Zojeila Flores commented that highly specialized departmental expectations limit students' choices and advisors trained into the system may not value broader interdisciplinary study. Chemistry Graduate student Kevin Shea made an eloquent plea for broadening graduate education in the arena of written and oral communication, for training faculty in mentoring and advising skills, and for educating students for a variety of career options-- not just research faculty in elite institutions. Assistant Professor John-Paul Clarke made clear that we need to develop

interactive learning systems that teach students how to "conceive, design and implement" as part of learning and research teams.

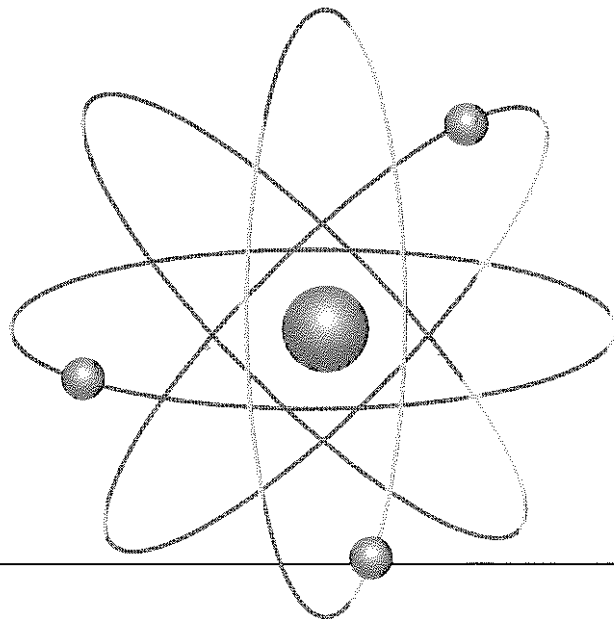
On October 4, we joined the Political Science department and a host of other co-sponsors in offering "Is Multiculturalism Bad for Women?" An impressive panel of Leila Ahmed, Abdullahi An-Na-im, Homi Bhabba, Martha Nussbaum, and Susan Moller Okin provided the standing-room-only crowd in the Wong Auditorium with a plethora of opinions, interpretations, and suggestions for future research.

On February 15 more than 1000 heard Noam Chomsky address "Freedom, Sovereignty, and Other Endangered Species." Examining United States foreign policy as revealed in Indonesia, Kosovo, and the World Trade Organization, he contended that US profit and power, not humanitarian impulses, determine US action and inaction.

On February 17 we filled the Wong with people eager to learn about "Making Good Ethics Good Business". Moderator Mary Rowe set the context noting that although most believe ourselves to be ethical, we do not agree on what constitutes ethical behavior in given circumstances. Laura Nash raised basic questions for our consideration-- Why is business ethics so hard? How do we frame the question of what is moral so that we can engage it? How do we foster a climate of mutual trust in business? Mitch Kapor drew us into all the complexity of living business ethics from his opening confession that even "ethical business guys" have dirty hands to his concluding affirmation that leaders must stand



**ON FEBRUARY 15 NOAM CHOMSKY  
ADDRESSES MORE THAN 1,000  
PEOPLE ON ISSUES OF FREEDOM,  
SOVEREIGNTY, AND HUMAN RIGHTS.**



for what they believe to be right despite our culture of chaos, greed, short-sightedness, and abuses of power. Offering the perspective of an Internet start-up CEO, Timothy Rowe contended that business ethics can not be communicated through a simple set of rules but must be understood in dynamic, real-life situations. Even as scenarios constantly change, decision-makers has to be ethically reflective.

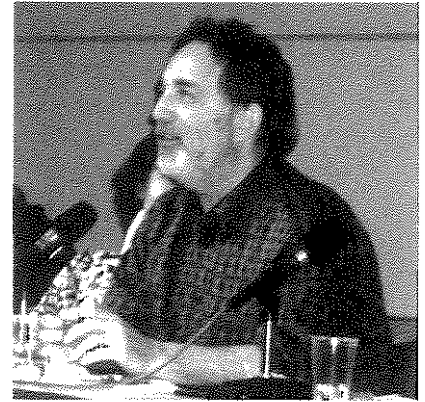
Sherry Turkle and Rodney Brooks provided a dynamic and enlightening conversation on "The Meaning of Human Identity" for a full house in 34-101 on March 2. Through responses from children interviewed, Turkle made clear that notions of what it means to be human are changing. As we accept more and more of a "cyborg consciousness", and as computational objects exhibit capabilities for independent reasoning, feelings, and being-- thus inviting more intimate relationships with humans-- we're left wondering how are we distinctive? She offered the audience an invitation to a "passionate quest for dual citizenship" in the computer and psychoanalytic realms. As Brooks introduced us to his robots COG, Kismet, and Hasbro Baby, we could see the dynamic interaction possible between us and them. What will differentiate us from machines as we transplant increasing numbers of organs and implant varieties of chips, electrodes, robotic parts, and genetically engineered cells? He reminded us that our notions of what is morally acceptable will evolve as technology advances and attitudes change. While we will not make ourselves "immortal", we will face many critical questions of the nature of human existence and uniqueness.

On March 16 we welcomed to MIT internationally renowned activist scientist Vandana Shiva. Shiva's message to our

community was simple-- no piracy from nature and ancient cultures, no patenting biodiversity and indigenous knowledge. She pushed us to reclaim our once-canonized, now-lost understanding of the Commons. She challenged us to reject the systems of free trade, trade liberalization, and structural adjustment policies. She encouraged us to advocate for economies that serve first their own communities and countries trading only genuine surpluses globally.

On March 23, we hosted an informal lunch conversation with Debra Harry, founder of Indigenous Peoples Council on Biocolonialism. She encouraged members of the MIT community to be cognizant of the implications of genetic research on indigenous peoples.

Continuing our reflection on issues related to genetic experimentation, we sponsored "Gene Therapy: The Promise and the Peril" on March 28. Claudia Mickelson opened with thoughtful, informed remarks about the status of human gene transfer research and the strengths and weaknesses of the oversight process. She outlined the challenges faced in establishing new protocols and raised questions about what constitutes an acceptable level of risk. Medical ethicist George Annas called for a moratorium on gene therapy research, highlighting key ethical issues, pointing out the ineffectuality of much of the current oversight process, advocating the creation of a powerful new federal regulatory agency, and insisting on the importance of public debate. As founder of the ALS Therapy Development Foundation, James Heywood offered the patient's perspective on why gene therapy trials need to happen. While acknowledging the necessity of oversight and the reality of incomplete



**MITCH KAPOR ENTERTAINS AND ENLIGHTENS HIS AUDIENCE AS HE REFLECTS ON MAKING GOOD ETHICS GOOD BUSINESS.**

data on effectiveness, he explained that expedited procedures, and not a moratorium, are needed for gene therapy research. Following his quick survey of the foci of gene therapy research and its utility, Sheldon Krinsky raised the key question-- is it good science? He then detailed the business connections to genetic research suggesting that these ties prevent the researchers and the oversight structures from doing their jobs effectively.

April 4 a small crowd gathered to hear Colombian labor activist Patricia Buritica discuss violations of human rights in Colombia. She offered a litany of harassment, imprisonments, and murders committed by Colombian authorities to limit the organizing efforts of workers. She made an eloquent plea for an end

**WHIT DIFFIE AND JEFF SCHILLER LISTEN AS JOE PATO FIELDS A QUESTION ON INTERNET SECURITY.**



to US support of authoritarian rule in Colombia.

On April 27, 175 people gathered for the 10th Annual J. Herbert Hollomon Memorial Symposium "Forging Sustainable Communities: How Do We Get from Here to There?" Moderator Geeta Pradahn noted that culture--rooted in tradition and wisdom-- and technology--grounded in the promise of modernity and the certainty of change-- must come together to address the "messy present" in which we live. Mark Dowie moved from stories of grassroots activism to a call for a strong, scientifically astute, broad-based environmental movement led by biological initiatives and not consumed by economic and political discussions. Bill Shutkin contended that sustainability challenges us to imagine alternative realities; we will have to redefine economic development and progress, reassess uses of technology, and reintroduce such concepts as prevention, justice, democratic participation, and beauty. Greg Watson focused us on tough questions as he asked whether environmentalism is bad for people of color, depressed urban areas, and developing countries? Are economic growth and sound environmental practices mutually exclusive? His discussion of the obstacles and opportunities for renewable energy in Massachusetts grounded his words in a very contemporary and concrete context. Fred Moavenzadeh challenged us to move from the local to the global. How do we create a world-wide consensus that respects both inter- and intra-generational equity issues? How do we set priorities when G-8 nations and developing countries necessarily focus on different environmental challenges?

On May 1, we closed out the year with a full house in the Wong Auditorium for "Internet Security: How Do We Achieve It?" Moderator Ron Rivest focused the conversation asking "What technical challenges should our students address?" Whitfield Diffie highlighted the complexity of the issue noting that the Internet comprises a diversity of technologies, individual rights, and legal authorities

representing numerous competing interests and that no one entity or individual has the authority to establish an Internet security policy. He warned against a public-key infrastructure advocating for comprehensible security systems with clear rules and tools so that individuals and institutions can see if they have the security they want. MIT alumnus Alan Davidson reminded his techie audience that freedom is not "inevitable"; he challenged them to design technologies that provide security without compromising privacy. Joe Pato called for a change of focus in designing security systems to shift from "keeping people out to enabling business". He challenged technologists to create security systems that are integrated and user friendly. Jeff Schiller highlighted obstacles to security such as the technologists' quest for "perfect" systems and creation of impossibly complex systems; the government's focus on surveillance, control, and protecting kids; businesses' resistance to adding security features if they will slow getting the product to market or increase costs; and the failure of government, academia, and business to insist on secure systems. He called on the government to require security and to create a regulatory structure with concern for both security and civil liberties.

In addition to drawing consistently large crowds to T&C programs, we expanded our impact globally by broadcasting eight of our programs live on the web and creating an audio archive at our web site so that people can listen to programs at their convenience. Despite limited publicity, more than 200 people enjoyed our live webcasts and more than 1000 have visited our archived programs. The realization of our goal to make T&C programs accessible through the web to a global audience happened thanks to extraordinary technical support from the Center for Advanced Educational Services (CAES). Our hope is to expand our web presence by providing a space for moderated dialogue about the issues raised in the programs. Naturally, this next step awaits the identification of new sources of funding and staffing because the expansion

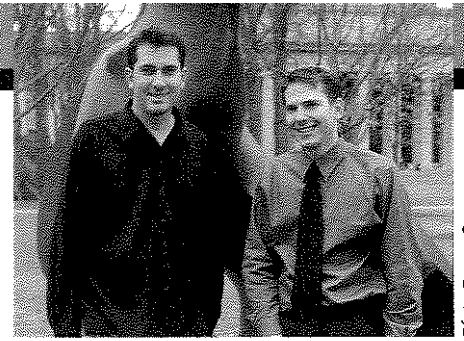


Photo: Dornia Coverey

**JAMES HEYWOOD, WHO SPOKE  
ON GENE THERAPY ON MARCH 28,  
WITH HIS BROTHER STEPHEN,  
WHO HAS ALS.**

of our program on campus and on-line stretches our human and financial resources.

T&C has achieved a degree of financial stability thanks to the generous annual contributions of Phillip ('52) and Martha Smith and scores of other friends. The future also looks bright due to the impressive endowment support of Bill ('56) and Betsy Leitch and Al ('38) and Carol Wilson. On February 17, Paul and Priscilla Gray hosted a wonderful dinner to thank the Wilsons for their commitment to T&C and to gather some of those faithful to the Forum.

Our dreams for the Technology and Culture Forum probably always should outstrip our resources. Our hope is to complete our million-dollar capital campaign within the year so that our focus can shift from funding what exists to living into our mission for the 21st century.

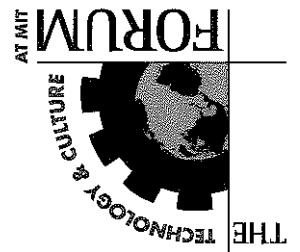
Great thanks are due to the T&C Steering Committee, our extraordinary associate coordinator Patricia Weinmann, our gracious benefactors, and our generous speakers. It is my privilege to weave dreams with all those who make T&C the flagship program it is.

Sincerely,

(The Rev.) Jane Soyster Gould

Monday Sept. 27, 1999	<p><b><u>RE-INVENTING HIGHER EDUCATION FOR THE 21ST CENTURY: Beyond Science And Engineering</u></b></p> <p><b>John Deutch</b>, Institute Professor, MIT  <i>Repondents: John-Paul Clarke</i>, Assistant Professor, Aero-Astro;  <i>Zojeila Flores</i>, '00; <i>Kevin Shea</i>, Graduate Student  <i>Moderator: Rosalind Williams</i>, Dean of Students, MIT</p>
Tuesday Feb. 15, 2000	<p><b><u>FREEDOM, SOVEREIGNTY AND OTHER ENDANGERED SPECIES</u></b></p> <p><b>Noam Chomsky</b>, Institute Professor, MIT</p>
Thursday Feb. 17, 2000	<p><b><u>MAKING GOOD ETHICS GOOD BUSINESS</u></b></p> <p><b>Mitch Kapor</b>, Founder, Lotus Development Corporation; Partner, Accel Partners  <b>Laura Nash</b>, Director, Institute for Values-Centered Leadership, Harvard Divinity School  <b>Timothy Rowe</b>, '95, Sloan School of Management; CEO, Cambridge Incubator, Inc.  <i>Moderator: Mary Rowe</i>, Special Assistant to the President; Adjunct Professor, Sloan</p>
Thursday March 2, 2000	<p><b><u>THE MEANING OF HUMAN IDENTITY</u></b></p> <p><b>Sherry Turkle</b>, Science, Technology and Society, MIT; author of <i>Life on the Screen</i> and <i>The Second Self: Computers and the Human Spirit</i>  <b>Rodney Brooks</b>, Director, Artificial Intelligence Laboratory, MIT  <i>Moderator: The Rev. Jane S. Gould</i>, Coordinator, T&amp;C; Episcopal Chaplain, MIT</p>
Thursday March 16, 2000	<p><b><u>STOLEN HARVEST: International Trade and the Global Food Supply</u></b></p> <p><b>Vandana Shiva</b>, Director, Research Foundation for Science, Technology and Natural Resources  <i>Moderator: Jonathan King</i>, Biology, MIT  <i>(Co-sponsored with South End Press and MIT Social Justice Cooperative)</i></p>
Tuesday March 28, 2000	<p><b><u>GENE THERAPY: The Promise and the Peril</u></b></p> <p><b>George Annas</b>, Chair, Health Law Department, Boston University School of Public Health  <b>James Heywood</b>, '91; Founder/Executive Director, ALS Therapy Development Foundation  <b>Sheldon Krimsky</b>, Professor, Urban &amp; Environmental Policy, Tufts University  <b>Claudia Mickelson</b>, Chair, Recombinant DNA Advisory Committee, NIH  <i>Moderator: The Rev. Jane S. Gould</i>, Coordinator, T&amp;C; Episcopal Chaplain, MIT</p>
Tuesday April 4, 2000	<p><b><u>LABOR UNDER FIRE IN COLOMBIA</u></b></p> <p><b>Patricia Buritica</b>, Leader, Casa de la Mujer, Central Organization of Colombian Workers  <i>Moderator: Jean Jackson</i>, MIT  <i>(Co-sponsored with Colombia Vive)</i></p>
Tuesday April 25, 2000	<p><b><u>FORGING SUSTAINABLE COMMUNITIES: How Do We Get From Here to There?</u></b>  <b>10th Annual J. Herbert Hollomon Memorial Symposium</b></p> <p><b>Mark Dowie</b>, Author of <i>Losing Ground: American Environmentalism at the Close of the 20th Century</i>  <b>Fred Moavenzadeh</b>, Director, Center for Technology, Policy and Industrial Development, MIT  <b>William Shutkin</b>, Founder/President, New Ecology, Inc.; Senior Lecturer, Urban Studies, MIT  <b>Gregory Watson</b>, Director, Massachusetts Renewable Energy Trust  <i>Moderator: Geeta Pradhan</i>, Director, Sustainable Boston  <i>(Co-sponsored with authors@mit)</i></p>
Monday May 1, 2000	<p><b><u>INTERNET SECURITY: How Do We Achieve It?</u></b></p> <p><b>Alan Davidson</b>, Staff Counsel, Center for Democracy and Technology  <b>Whitfield Diffie</b>, Distinguished Engineer, Sun Microsystems; Inventor of public-key cryptography  <b>Joseph Pato</b>, Senior Scientist, Hewlett Packard, Trusted E-Services Lab  <b>Jeffrey Schiller</b>, Manager, Campus Computer Network, MIT; author of MIT Kerberos Authentication  <i>Moderator: Ronald Rivest</i>, Electrical Engineering and Computer Science, MIT</p>

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THE TECHNOLOGY AND CULTURE FORUM **STEERING COMMITTEE** 1999 / 2000

**The Technology and Culture Forum  
at MIT 1999-2000**

**STEERING COMMITTEE**

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**S.W. Chisholm** — *Civil and Environmental Engineering*

**Joel Clark** — *Materials Science and Engineering*

**John Paul Clarke** — *Aeronautics and Astronautics*

**James Fay** — *Mechanical Engineering, Professor Emeritus*

**Zojeila Flores** — '00

**Henry Jacoby** — *Sloan School of Management*

**Jay Keyser** — *Linguistics and Philosophy;*  
*Special Assistant to the Provost*

**Jonathan King** — *Biology*

**William R. Leitch** — '56

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